Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A communication device for performing communication according to a predetermined protocol, comprising:

a memory; and

a processor,

wherein the processor is configured to execute instructions stored in the memory to divide original data into a plurality of blocks for separately transmitting the blocks on a plurality of connections, and store information for restoring the plurality of blocks to the original data within a field of a header instead of information to be stored in the field according to the predetermined protocol, and

wherein the processor is further configured to execute instructions to examine maximum values of a packet size allowed by a connection related to communication, and [[unify]] set a smallest size among said packet size maximum values as a ~~maximum~~ representative value of an allowable packet size, and divide the original data into blocks of a size based on a multiple of the representative value of the maximum packet size and allot divided blocks to said plurality of connections separately.

2. (Previously Presented) The communication device according to claim 1, wherein the information for restoring the plurality of blocks to the original data is stored in an option field within the header of a transport protocol.

3. (Cancelled)

4. (Previously Presented) The communication device according to claim 1, wherein the processor is further configured to execute instructions to examine maximum values of a packet size allowed by a connection related to communication and communicate with a packet size equal to or less than a smallest size among said packet size maximum values.

5. (Previously Presented) The communication device according to claim 1, wherein a data length is stored as information for restoring said original data.

6. (Previously Presented) The communication device according to claim 1,

wherein the processor is configured to execute instructions stored in the memory to receive a plurality of blocks and, based on said information stored within the field of the header, restore the plurality of blocks to original data.

7. (Previously Presented) The communication device according to claim 6, wherein the header is a header of a transport protocol.

8. (Previously Presented) The communication device according to claim 6, wherein the information stored within the header is stored in an option field of the header.

9. (Previously Presented) The communication device according to claim 6, wherein the information stored within the header is stored in a part of a timestamp field of an option field within the header.

10. (Previously Presented) The communication device according to claim 1, wherein the header is an IP header.

11. (Previously Presented) The communication device according to claim 1, wherein information for restoring the plurality of blocks to the original data is stored in a fragment field within an IP header.

12. (Previously Presented) The communication device according to claim 6, wherein the processor is configured to execute instructions stored in the memory to examine a Maximum Transfer Unit (MTU) usable by the plurality of connections by a path MTU discovery option and unify MTU of the respective connections to the smallest MTU obtained by said examination.

13. (Previously Presented) The communication device according to claim 6, wherein the processor is configured to execute instructions stored in the memory to refer to a data length to restore the plurality of blocks to the original data.

14. (Previously Presented) The communication device according to claim 1, wherein the processor is further configured to execute instructions to transfer the plurality of blocks based on a communication rate.

15. (Previously Presented) The communication device according to claim 1, wherein the original data is configured to be restored by referring to the information for restoring the plurality of blocks to the original data within the header.

16. (Previously Presented) The communication device according to claim 1, wherein the processor is further configured to execute instructions to reduce a volume of data to be transferred when a TCP communication rate is low, and increase the volume of data to be transferred when the TCP communication rate becomes high.

17. (Currently Amended) A method, comprising:

using a communication device for performing communication according to a predetermined protocol to:

divide original data into a plurality of blocks for separately transmitting the blocks on a plurality of connections;

store information for restoring the plurality of blocks to the original data within a field of a header instead of information to be stored in the field according to the predetermined protocol; and

using the communication device to examine maximum values of a packet size allowed by a connection related to communication, and [[unify]] set a smallest size among said packet size maximum values as a ~~maximum~~ representative value of an allowable packet size, and divide the original data into blocks of a size based on a multiple of the representative value of the maximum packet size and allot divided blocks to said plurality of connections separately.

18. (Previously Presented) The method according to claim 17, wherein the information for restoring the plurality of blocks to the original data is stored in an option field within the header of a transport protocol.

19. (Cancelled)

20. (Previously Presented) The method according to claim 17, further comprising using the communication device to examine maximum values of a packet size allowed by a connection related to communication and communicate with a packet size equal to or less than a smallest size among said packet size maximum values.

21. (Previously Presented) The method according to claim 17, wherein a data length is stored as the information for restoring said original data.

22. (Previously Presented) The method according to claim 17, comprising:

using the communication device to:

execute instructions stored in the memory to receive a plurality of blocks and, based on information stored within the field of the header, restore the plurality of blocks to original data.

23. (Previously Presented) The method according to claim 22, wherein the header is a header of a transport protocol.

24. (Previously Presented) The method according to claim 22, wherein the information stored within the header is stored in an option field of the header.

25. (Previously Presented) The method according to claim 22, wherein the information stored within the header is stored in a part of a timestamp field of an option field within the header.

26. (Previously Presented) The method according to claim 17, wherein the header is an IP header.

27. (Previously Presented) The method according to claim 17, wherein the information for restoring the plurality of blocks to the original is stored in a fragment field within an IP header.

28. (Previously Presented) The method according to claim 22, further comprising using the communication device to examine an MTU usable by the plurality of connections

by a path MTU discovery option and unify MTU of the respective connections to the smallest MTU obtained by said examination.

29. (Previously Presented) The method according to claim 22, further comprising using the communication device to refer to a data length to restore the plurality of blocks to the original data.

30. (Previously Presented) The method according to claim 17, further comprising using the communication device to transfer the plurality of blocks based on a communication rate.

31. (Previously Presented) The method according to claim 17, wherein the original data is configured to be restored by referring to the information for restoring the plurality of blocks to the original data within the header.

32. (Previously Presented) The method according to claim 17, further comprising using the communication device to reduce a volume of data to be transferred when a TCP communication rate is low, and increase the volume of data to be transferred to each connection at one time when the TCP communication rate becomes high.

33. (Currently Amended) A computer program product embodied on a non-transitory computer-readable storage medium of a communication device for performing communication according to a predetermined protocol, comprising:

computer code for dividing original data into a plurality of blocks for separately transmitting the blocks on a plurality of connections;

computer code for storing information for restoring the plurality of blocks to the original data within a field of a header instead of information to be stored in the field according to the predetermined protocol; and

computer code for examining maximum values of a packet size allowed by a connection related to communication and comprising computer code for ~~unifying~~ setting a smallest size among said packet size maximum values as a ~~maximum~~ representative value of an allowable packet size, and dividing the original data into blocks of a size based on a

multiple of the representative value of the maximum packet size and allotting divided blocks to said plurality of connections separately.

34. (Previously Presented) The computer program product according to claim 33, the information for restoring the plurality of blocks to the original data is stored in an option field within the header of a transport protocol.

35. (Cancelled)

36. (Previously Presented) The computer program product according to claim 33, further comprising computer code for examining maximum values of a packet size allowed by a connection related to communication and comprising computer code for communicating with a packet size equal to or less than a smallest size among said packet size maximum values.

37. (Previously Presented) The computer program product according to claim 33, further comprising computer code for storing a data length as the information for restoring said original data.

38. (Previously Presented) The computer program product according to claim 33, comprising:

computer code for receiving a plurality of blocks and, based on information stored within the field of the header; and

computer code for restoring the plurality of blocks to original data

39. (Previously Presented) The computer program product according to claim 38, wherein the header is a header of a transport protocol.

40. (Previously Presented) The computer program product according to claim 38, wherein the information stored within the header is stored within an option field within the header.

41. (Previously Presented) The computer program product according to claim 38, wherein the information stored within the header is stored in a part of a timestamp field of an option field within the header.

42. (Previously Presented) The computer program product according to claim 33, wherein the header is an IP header.

43. (Previously Presented) The computer program product according to claim 33, wherein information for restoring the plurality of blocks to the original data is stored in a fragment field within an IP header.

44. (Previously Presented) The computer program product according to claim 38, further comprising computer code for examining an MTU usable by the plurality of connections by a path MTU discovery option and computer code for unifying MTU of the respective connections to the smallest MTU obtained by said examination.

45. (Previously Presented) The computer program product according to claim 38, further comprising computer code for referring to a data length to restore the plurality of blocks to the original data.

46. (Previously Presented) The computer program product according to claim 33, further comprising computer code for transferring the plurality of blocks based on a communication rate.

47. (Previously Presented) The computer program product according to claim 33, further comprising computer code for restoring the plurality of blocks to the original data by referring to the information within the header.

48. (Previously Presented) The computer program product according to claim 33, further comprising computer code for reducing a volume of data to be transferred when a TCP communication rate is low, and increasing the volume of data to be transferred when the TCP communication rate becomes high.

49. (Previously Presented) The communication device according to claim 6, wherein the communication device receives the plurality of blocks at different communication rates.

50. (Previously Presented) The communication device according to claim 6, wherein the communication device is a proxy server.

51. (Previously Presented) The communication device according to claim 6, wherein the information stored within the header comprises a sequence number and a block size.

52. (Previously Presented) The method according to claim 22, wherein the communication device receives the plurality of blocks at different communication rates.

53. (Previously Presented) The method according to claim 22, wherein the communication device is a proxy server.

54. (Previously Presented) The method according to claim 22, wherein the information stored within the header comprises a sequence number and a block size.

55. (Previously Presented) The computer program product according to claim 38, wherein the plurality of blocks are received at different communication rates.

56. (Previously Presented) The computer program product according to claim 38, wherein the computer-readable storage medium is a proxy server.

57. (Previously Presented) The computer program product according to claim 38, wherein the information stored within the header comprises a sequence number and a block size.